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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/477,278	01/04/2000	RAYMOND TAH-SHENG HSU	PA000090	8966

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER	
PHAN, TRI H	

ART UNIT	PAPER NUMBER
2661	9

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/477,278	HSU ET AL.	
	Examiner	Art Unit	
	Tri H. Phan	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *01 August 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on August 1st, 2003. New claim 21 is added. Claims 1-21 are now pending in the application.

Drawings

2. The corrected or substitute drawings were received on August 1st, 2003. These drawings are approved by the Examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Manning et al.** (U.S.6,580,699) in view of **Dynarski et al.** (U.S.6,628,671).

- In regard to claims 1, 11, 16 and 21, **Manning** discloses in Figs. 1-2, 5 and in the respective portions of the specification about the system, method and means for establishing an Radio-Packet data serving node 'R-P' ("*Packet Data Services Network*", 'PDSN') connection when the mobile station 'MS' roams from the control of the old base station controller 'BSC'

("*first infrastructure element*") to the new BSC ("*second infrastructure element*") (For example see Figs. 1-2; Col. 1, Lines 12-24); wherein the MS stores and uses the registration message ("*message*") to send information about the PPP session status (wherein the MS may have one or more PPP instances ("*IP instances*") of packet data services simultaneously as specified in Col. 4, Lines 23-24; and each instance has different session Id), PDSN information ("*list of identifier*"; For example see Col. 4, Lines 18-26) to the new BSC (For example see Fig. 5, Col. 5, Lines 12-35) when moving from the coverage area of the old BSC to the coverage area of the new BSC for establishing the point-to-point ('*PPP*') connection with the PDSN (For example see Col. 3, Lines 50-56). **Manning** does disclose about the dormant state of the MS (For example see Col. 5, Line 54 through Col. 6, Line 22), but fails to disclose about "*the dormant network connections associated with the mobile station*" in the registration message. However, such implementation is known in the art.

For example, **Dynarski** discloses in Fig. 1, Abstract and in the respective portions of the specification about "*the dormant network connections associated with the mobile station*" in the PPP sessions for the MS goes dormant and connects to different IWUs ("*infrastructure elements*"), i.e. 'roaming', or to a different ports through the call set-up message ("*message*") containing information uniquely associated with the MS (For example see Col. 2, Lines 14-63; Col. 4, Lines 4-22; Col. 7, Lines 1-35) in the cellular network and the packet-switched network.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to combine the invention as taught by **Dynarski**, by implementing the dormant connections information associated with the mobile station into the **Manning** MS' call

set-up message, with the motivation being to improve the ability to avoid re-negotiation of the PPP protocols and instead use the PPP state from the dormant session of the MS when roaming.

- Regarding claims 2, 7, 12 and 17, the combination of **Dynarski** and **Manning** further discloses about "*the dormant connections are point-to-point protocol connections*" (For example see **Dynarski**: Col. 6, Lines 43-67).

- In regard to claims 3, 8, 13 and 18, the combination of **Dynarski** and **Manning** further discloses about "*the first and second infrastructure elements are packet data service nodes*" ('PDSN'; For example see **Manning**: Figs. 1-2; Col. 1, Lines 12-24).

- Regarding claims 4, 9, 14 and 19, the combination of **Dynarski** and **Manning** further discloses about "*the service reference identifiers*" ('session Id'; For example see **Manning**: Figs. 1-2; Col. 1, Lines 12-24; **Manning**: Col. 4, Lines 18-26).

- In regard to claims 5, 10, 15 and 20, the combination of **Dynarski** and **Manning** further discloses the message include the PPP connection state ("*indicator*"; For example see **Manning**: Col. 5, Lines 12-23; **Dynarski**: Abstract; Col. 6, Lines 43-67) when the MS roams from one radio network to another.

- Regarding claim 6, **Manning** discloses about the antenna, memory to store information and program process such as storing information, sending Register message with PPP session

status or establishing new R-P connection when the mobile roams to new BSC (For example see Figs. 1, 5; Col. 5, Lines 12-33); wherein the MS stores and uses the registration message ("*message*") to send information about the PPP session status (wherein the MS may have one or more PPP instances ("*IP instances*") of packet data services simultaneously as specified in Col. 4, Lines 23-24; and each instance has different session Id), PDSN information ("*list of identifier*"; For example see Col. 4, Lines 18-26) to the new BSC (For example see Fig. 5, Col. 5, Lines 12-35) when moving from the coverage area of the old BSC to the coverage area of the new BSC for establishing the point-to-point ('*PPP*') connection with the PDSN (For example see Col. 3, Lines 50-56). **Manning** does disclose about the dormant state of the MS (For example see Col. 5, Line 54 through Col. 6, Line 22), but fails to disclose about "*the dormant network connections associated with the mobile station*" in the registration message. However, such implementation is known in the art.

For example, **Dynarski** discloses in Fig. 1, Abstract and in the respective portions of the specification about "*the dormant network connections associated with the mobile station*" in the PPP sessions for the MS goes dormant and connects to different IWUs ("*infrastructure elements*"), i.e. 'roaming', or to a different ports through the call set-up message ("*message*") containing information uniquely associated with the MS (For example see Col. 2, Lines 14-63; Col. 4, Lines 4-22; Col. 7, Lines 1-35) in the cellular network and the packet-switched network.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to combine the invention as taught by **Dynarski**, by implementing the dormant connections information associated with the mobile station into the **Manning** MS' call

set-up message, with the motivation being to improve the ability to avoid re-negotiation of the PPP protocols and instead use the PPP state from the dormant session of the MS when roaming.

Response to Arguments

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee (U.S.6,208,862), **Mäenpääet et al.** (U.S.6,590,880), **Wang et al.** (U.S.6,178,164) and **Hjelm et al.** (U.S.5,978,368) are all cited to show devices and methods for improving the communication architectures for the mobile station when roaming in the data packet network, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (703) 305-7444. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Olms can be reached on (703) 305-4703.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 305-3900.

Tri H. Phan
October 22, 2003

DAVIS TON
PRIMARY EXAMINER